

*REMARKS*

Reconsideration of the pending application is respectfully requested in view of the foregoing amendments and the following remarks.

*Status of the Application*

Claims 1-46 are currently pending. No amendments are presented in this response.

*Summary of the Office Action*

The Office Action opens by rejecting claims 1, 2, 8, 9, 14, 17, 24, 25, 30, 31, 37, 38 and 43 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,163,999 (Uchida et al.)

Claims 2, 3, 5-7, 18, 19, 21-23, 31, 32 and 34-36 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Published Patent Application US2002/0077450 (Kirchmeyer et al.)

Claims 4, 11, 13, 20, 27, 29, 33, 40 and 42 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of Kirchmeyer et al. and further in view of U.S. Patent 6,632,472 to Louwet et al.

Claims 10, 26 and 39 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Patent 6,827,435 (Domoto et al.)

Claims 12, 28 and 41 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of Kirchmeyer et al. and Louwet et al. and further in view of Domoto et al.

Claims 15, 16, 44 and 45 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Patent 5,658,713 (Van Hunsel et al.).

Claims 1, 14, 17, 30, 43 and 46 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida in view of U.S. Patent 6,165,691 (Van Damme et al.).

Finally, claims 1, 17 and 46 are rejected under 35 U.S.C. § 103(a) over Uchida et al. in view of GB 2,254,917 (Appel et al.).

Discussion

A discussion of the rejections asserted in the Office Action is set forth in the following sections.

- A. Claims 1, 2, 8, 9, 14, 17, 24, 25, 30, 31, 37, 38 and 43 are rejected as anticipated under 35 U.S.C. § 102(b) by U.S. Patent 5,163,999 (Uchida et al.)

The Office Action asserts that Uchida et al. discloses the process for offset printing as claimed, including “as a solution or a dispersion in said fountain medium at least one moiety having at least pH-indicating (col. 10, lines 17-20) . . . properties. *See Office Action, page 2.* The passage in Uchida et al. cited as support is as follows:

It is preferred that the dampening solution having a pH of 3 to 6. When the pH is lower than 3, an etching effect on supports is enhanced and plate wear is lowered. Usually, mineral acids, organic acids or inorganic salts are added to adjust the pH to from 3 to 6. The amount of these compounds to be added are preferably 0.001 to 5% by weight.

*See Uchida et al., col. 10, lines 17-20.*

Uchida et al. references pH again a few lines later, disclosing that

The dampening solution composition of the present invention can have a pH of 7 to 11 by incorporating an alkali metal hydroxide, an alkali metal salt of phosphoric acid, an alkali metal salt of carbonate or a silicate therein.

*See Uchida et al., col. 10, lines 32-36.*

When Uchida et al. mentions pH values, it does so only in the context of describing a need for the addition of pH-adjusting compounds. There is no disclosure in Uchida et al., let alone any teaching, of including as a solution or a dispersion in said fountain medium at least one moiety having at least pH-indicating properties as required by the pending claims.

This distinction between pH-adjusting compounds and pH-indicating compounds is not only clearly set forth in the pending claims, but is also supported by the pending application as filed. Moieties having pH-indicating properties in accordance with the claimed invention are exemplified at page 16, lines 19-21:

Suitable pH-indicating moieties for use in the hydrophilic phase used in the process, according to the present invention, include: phenolphthalein, methyl red and methyl orange.

*See application as filed, page 16, lines 19-21.* The Office Action has failed to provide any support for its conclusion that the pH-adjusting compounds disclosed in Uchida et al. are the same as the pH-indicating compounds required by the pending claims. Indeed, the terms themselves express a clear distinction: a compound that adjusts the pH of a composition would not be understood to provide an indication of the pH of the composition; a compound that indicates the pH of a composition would not be understood to alter or adjust the pH of the composition. Any attempt to equate the two components in the context of the present invention is based solely of hindsight, and fails to recognize the distinction between these types of components, which distinction is clearly recited in the claimed invention.

The Office Action further argues that Uchida et al.'s disclosure of polyethylene glycol (PEG) (*see col. 6, lines 28-30*) discloses the intrinsically conductive polymer required by the pending claims. However, nowhere in Uchida et al. is there mentioned that PEG is an intrinsically conductive polymer. On the contrary, the function of PEG in Uchida et al. is described therein as a "water-soluble organic solvent which can be used to lower the dynamic surface tension of the dampening solutions." *See, e.g., Uchida et al., col. 6, lines 9-32.* There is nothing in Uchida et al. (or in any other prior art reference) which supports the assertion in the Office Action that PEG (or any other component in Uchida et al.) functions as an intrinsically conductive polymer.

As Uchida et al. fails to disclose each and every limitation of the invention as claimed, withdrawal of the anticipation rejection of claims 1, 2, 8, 9, 14, 17, 24, 25, 30, 31, 37, 38 and 43 is respectfully requested.

- B. Claims 2, 3, 5-7, 18, 19, 21-23, 31, 32 and 34-36 are rejected under 353 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Published Patent Application US2002/0077450 (Kirchmeyer et al.)

Applicants understand that the Office Action argues that "it would have obvious to one of ordinary skill in the art at the time of the invention to modify Uchida to have the solution as taught by Kirchmeyer, in order to utilize components that dissolve quickly in solvents." *See Office Action, page. 4.*

In order to support the asserted combination, there must be a reason provided by the reference itself to support the asserted combination. Applicants submit that the alleged substitution of the purported intrinsically conductive polymers of Kirchmeyer simply because Uchida allegedly desires the use of components that dissolve quickly in solvents is insufficient to support the obviousness rejection.

The problem facing Uchida et al. is, simply put by Uchida et al. itself, is “to provide a dampening solution that is completely free of isopropyl alcohol (IPA), yet is a suitable alternative for IPA-containing dampening solutions.” This statement, or any other in Uchida et al., fails to motivate one skilled in the art to, in effect, swap the Kirchmeyer et al. thiophene-containing composition for that used in Uchida et al. There is no suggestion in Kirchmeyer et al. that its composition would function as an alternative to IPA-containing dampening solutions. Indeed, Uchida et al. is concerned only with the improvement of compositions that produce a “sacrificial layer” on a lithographic printing plate. *See, e.g., Uchida et al., col. 4, lines 5-22.* This is also explained in the present application as filed, at pages 1, line 31 to page 2, line 19 (fountain solution conventionally acts as a weak sacrificial layer and prevents ink from depositing on the non-image area of the plate and has the function of re-building the non-printing (desensitized) areas of the printing plate during a press run).

In contrast, Kirchmeyer et al. teaches no such use of its compositions. On the contrary, Kirchmeyer et al. desires to provide electrically conductive or antistatic coatings, e.g., antistatic finishing of cathode ray tubes, transparent electrodes for the production of capacitors, batteries, etc. *See, e.g., Kirchmeyer [¶0042].* Thus, and assuming one would use the Kirchmeyer et al. composition in Uchida et al. at all, it would be as a substitute for the ink—not as a fountain solution.

In sum, no one skilled in the art, after reading Kirchmeyer, would be motivated to use the Kirchmeyer composition in the Uchida et al. system as a substitute for IPA-containing dampening liquids because there is no teaching in Kirchmeyer et al. to support such a use, let alone support for the purported increased solubility purportedly offered thereby (which has no relevance at all to the problem facing Uchida et al.), as set forth in the Office Action. Assuming *arguendo* there was a basis for such substitution or use, the Kirchmeyer

composition would not be used in place of the ink in such printing systems, and not as a fountain solution.

Clearly, the only justification for the asserted “swap” of Kirchmeyer et al. compositions into the Uchida et al. system as alleged in the Office Action is hindsight, which is not permitted.

For at least these reasons, Applicants respectfully request withdrawal of the obviousness rejection of claims 2, 3, 5-7, 18, 19, 21-23, 31, 32 and 34-36 over Uchida et al. in view of Kirchmeyer et al.

- C. Claims 4, 11, 13, 20, 27, 29, 33, 40 and 42 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of Kirchmeyer et al. and further in view of U.S. Patent 6,632,472 to Louwet et al.

The pending application claims priority to U.S. provisional patent application 60/427,162, filed November 18, 2002. Louwet et al. was filed on June 26, 2001, and published on February 7, 2002. Louwet et al., while being filed prior to the priority date of the pending application, was published less than one year before the effective U.S. filing date of the pending application (i.e., the filing date of the U.S. provisional patent application). Under this scenario, Louwet et al. is not prior art under 35 U.S.C. § 102(b), and thus may not be used in the obviousness rejection. Further, to the extent that Louwet et al. may constitute prior art under 35 U.S.C. § 102(e), Applicants submit that Louwet et al. may not be used to reject these claims pursuant to 35 U.S.C. § 103(c), because both Louwet et al. and the pending application were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person, i.e., AGFA-Gevaert. *See Reel 014489, Frame 0647, recorded April 2, 2004 regarding the pending application; see Reel 012061, Frame 0804, recorded August 10, 2001, regarding Louwet et al.*

Applicants note that Louwet et al. was published on February 7, 2002 (i.e., prior to the effective U.S. filing date of the pending application of November 18, 2002), and also claims priority to EP 00202218.4, filed June 26, 2000, which in turn provides the basis for a priority claim in connection with a PCT application published on January 3, 2002, as WO02/00759A1 (Applicant: AGFA-Gevaert; Inventors: Louwet and Samijn). Copies of

these published applications (“the Louwet publications”) are enclosed for the Examiner’s convenience, and their content is addressed in the following paragraphs.

In order to support the asserted combination, there must be a reason provided by the reference itself to support the asserted combination. Applicants have addressed the deficiencies of Kirchmeyer in Section B *supra*, and submit that the Louwet published applications do not overcome the deficiencies of Uchida et al. and Kirchmeyer et al. Clearly, the alleged substitution of the purported intrinsically conductive polymers of Louwet simply because Uchida et al. allegedly desires the use of components that dissolve quickly in solvents is insufficient to support the obviousness rejection.

The problem facing Uchida et al. is, simply put by Uchida et al. itself, is “to provide a dampening solution that is completely free of isopropyl alcohol (IPA), yet is a suitable alternative for IPA-containing dampening solutions.” This statement, or any other in Uchida et al., fails to motivate one skilled in the art to, in effect, swap the thiophene-containing compositions in the Louwet publications for that used in Uchida et al. There is no suggestion in the Louwet publications that its composition would function as an alternative to IPA-containing dampening solutions. Indeed, Uchida et al. is concerned only with the improvement of compositions that produce a “sacrificial layer” on a lithographic printing plate. *See, e.g., Uchida et al., col. 4, lines 5-22.* This is also explained in the present application as filed, at pages 1, line 31 to page 2, line 19 (fountain solution conventionally acts as a weak sacrificial layer and prevents ink from depositing on the non-image area of the plate and has the function of re-building the non-printing (desensitized) areas of the printing plate during a press run). There is no teaching in the references to use a fountain solution in place of an ink composition is a process for the offset printing of a receiving medium (as required by the present invention), or vice-versa.

In contrast, the Louwet publications do not in any respect teach the use of its compositions as fountain solutions. On the contrary, the publications desire to provide a printing ink, electrically conductive or antistatic layers, etc. *See, e.g., WO02/00759A1, pages 4-5 (E.g., “A printing ink is also provided according to the present invention comprising the above-mentioned redispersible or soluble product.”)*. Thus, and assuming one would use the

Louwet compositions in Uchida et al. at all, it would be as a substitute for the ink—not as a fountain solution.

In sum, no one skilled in the art, after reading the Louwet publications, would be motivated to use the Louwet compositions described therein in the Uchida et al. system as a substitute for IPA-containing dampening liquids because there is no teaching in the Louwet publications to support such a use, let alone support for the purported increased solubility purportedly offered thereby (which has no relevance at all to the problem facing Uchida et al.), as set forth in the Office Action. Assuming *arguendo* there was a basis for such substitution or use, the compositions described in the Louwet publications would be used in place of the ink in such printing systems, and not as a fountain solution.

Clearly, the only justification for the asserted “swap” of the compositions described in the Louwet publications into the Uchida et al. system as alleged in the Office Action is hindsight, which is not permitted.

For at least these reasons, Applicants respectfully request withdrawal of the obviousness rejection entered against claims 4, 11, 13, 20, 27, 29, 33, 40 and 42.

- D. Claims 10, 26 and 39 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Patent 6,827,435 (Domoto et al.)

As described in Section A., *supra*, Uchida et al. fails to disclose or teach each and every limitation recited in the independent claims, e.g., the inclusion of any of the claimed moieties in the manner described in the claimed methods. The Office Action alleges that Domoto et al. provides limited teaching generally directed to heating of a substrate subsequent to printing.

As Domoto et al. admittedly fails to overcome the shortfalls of Uchida et al. relative to the claimed methods (as described in preceding Sections A-C), Applicants submit that withdrawal of the obviousness rejection of claims 10, 26 and 39 is warranted on this basis alone.

- E. Claims 12, 28 and 41 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of Kirchmeyer et al. and Louwet et al. and further in view of Domoto et al.

Applicants incorporate the remarks set forth in Section C *supra* relative to Louwet et al. Because Domoto et al. does not overcome the deficiencies of Uchida et al., Kirchmeyer et al. and Louwet et al. as described in preceding Sections A-C, Applicants respectfully request withdrawal of the obviousness rejection entered against claims 12, 28 and 41.

- F. Claims 15, 16, 44 and 45 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida et al. in view of U.S. Patent 5,658,713 (Van Hunsel et al.).

As described in Section A, *supra*, Uchida et al. fails to disclose or teach each and every limitation recited in the independent claims, e.g., the inclusion of any of the claimed moieties in the manner described in the claimed methods. The Office Action alleges that Van Hunsel et al. provides limited teaching generally directed to a fountain solution having a dye and/or pigment. Thus, Applicants submit that the asserted combination of this reference with Uchida et al. fails to render obvious any of the pending claims.

However, and assuming *arguendo* the asserted combination is proper, Van Hunsel et al. teaches only the inclusion of a transparent pigment; there is no indication therein that this pigment is colored (as one would normally understand such a pigment, one that is visible to the human eye). Further, there is no teaching or suggestion in Van Hunsel et al. that this pigment is transferred from the printing plate to form a colored or white pattern on a receiving medium.

As Van Hunsel et al. admittedly fails to overcome the shortfalls of Uchida et al. relative to the claimed methods (as described in preceding Sections A-C), and further fails to support the teaching attributed to it by the Office Action, Applicants respectfully submit that withdrawal of the obviousness rejection of claims 15, 16, 44 and 45 is warranted.

- G. Claims 1, 14, 17, 30, 43 and 46 are rejected under 35 U.S.C. § 103(a) as obvious over Uchida in view of U.S. Patent 6,165,691 (Van Damme et al.).

As described in Section A *supra*, Uchida et al. fails to disclose or teach each and every limitation recited in the independent claims, e.g., the inclusion of any of the claimed moieties in the manner described in the claimed methods. The Office Action alleges that Van Damme et al. teaches a fountain solution having at least one moiety having at least whitening (titanium oxide) properties, and that it would have been obvious “to one of ordinary skill in



the art at the time of the invention to modify Uchida et al. to have the titanium oxide as taught by Damme, in order to provide a desired color to the solution.” *See Office Action, page 7.*

Applicants respectfully submit that the asserted combination of this reference with Uchida et al. fails to render obvious any of the pending claims.

Van Damme includes a great number of components in its specific type of fountain solution. In one respect, it teaches that various water-insoluble materials may be used to reduce scumming in non-exposed areas of a printing plate prepared without wet processing, the plate having a specific binder that is heat-switchable—and does not use these components to provide color as asserted in the Office Action. *See, e.g., a comparison of Examples 1 and 2.* As Uchida et al. fails to recognize scumming as a problem with any of its processing methods, there is no motivation absent hindsight to include any of the water-insoluble materials from Van Damme into the Uchida et al. dampening solution as alleged in the Office Action, let alone select titanium dioxide from among the many possible components listed in Van Damme (with silica being preferred).

The focus of Uchida et al. is to provide a dampening solution which is completely free of IPA, yet is a suitable alternative for IPA-containing dampening solutions. *See, e.g., Uchida et al., col. 3, line 46 to col. 4, lines 10.* The asserted introduction of titanium dioxide into the Uchida et al. dampening solution would be based solely on hindsight, as Van Damme does not teach or suggest that any of its components (let alone titanium dioxide) would have any relevance to solving the IPA-substitution issue. Clearly, none of the water-insoluble components disclosed in Van Damme (e.g., titanium dioxide) would be acceptable substitutes for IPA in the Uchida et al. dampening solutions.

For at least the foregoing reasons, Applicants respectfully submit that withdrawal of the obviousness rejection of claims 1, 14, 17, 30, 43 and 46 is warranted.

H. Claims 1, 17 and 46 are rejected under 35 U.S.C. § 103(a) over Uchida et al. in view of GB 2,254,917 (Appel et al.).

As described in Section A *supra*, Uchida et al. fails to disclose or teach each and every limitation recited in the independent claims, e.g., the inclusion of any of the claimed moieties in the manner described in the claimed methods. The Office Action alleges that

Appel et al. teaches a fountain solution having at least one moiety having at least fluorescent properties, and that it would have been obvious “to one of ordinary skill in the art at the time of the invention to modify Uchida et al. to have a solution with fluorescent properties as taught by Appel, in order to effectively determine the thickness of the solution film on a printing cylinder.” *See Office Action, page 8.*

Applicants respectfully submit that the asserted combination of this reference with Uchida et al. fails to render obvious any of the pending claims. As is well established, there must be a basis for the asserted combination in the references themselves, or the rejection must be withdrawn. Here, there is no such basis.

Appel teaches the inclusion of a fluorescent component to assist in determining the thickness of the dampening film. Uchida et al. fails to recognize dampening film thickness as a problem, or even as a property that should be monitored. As stated earlier, Uchida et al. is directed to providing a dampening solution which is completely free of IPA, yet is a suitable alternative for IPA-containing dampening solutions. *See, e.g., Uchida et al., col. 3, line 46 to col. 4, lines 10.* The asserted introduction of a fluorescent material into the Uchida et al. dampening solution would be based solely on hindsight, as Appel does not teach or suggest that any of its components (let alone a fluorescent material) would have any relevance to solving the IPA-substitution issue presented in Uchida et al. Clearly, none of the fluorescent materials disclosed in Appel would be acceptable substitutes for IPA in the Uchida et al. dampening solutions.

The law requires a teaching or suggestion in a reference that would motivate one skilled in the art to, in this case, introduce a fluorescent component into the Uchida et al. dampening solution. Here, there is none, as Uchida et al. is directed to addressing a problem that is not in any respect related to that addressed by Appel. Hindsight is the only possible basis for the asserted combination.

For at least the foregoing reasons, Applicants respectfully submit that withdrawal of the obviousness rejection of claims 1, 17 and 46 is warranted.

Conclusion

As Applicants believe the application is in proper condition for allowance, the examiner is respectfully requested to pass the application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

/Christopher T. Griffith/

Christopher T. Griffith, Reg. No. 33,392

LEYDIG, VOIT & MAYER, LTD.

Two Prudential Plaza, Suite 4900

180 North Stetson Avenue

Chicago, Illinois 60601-6731

(312) 616-5600 (telephone)

(312) 616-5700 (facsimile)

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